

# A Remarkable New Brittle Star

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OPHIOCRYPtus gen. nov.

ὄφις=*snake* (a very common prefix for genera of brittle stars)  
κρυπτός=*concealed*; in reference to the concealment  
of the disk scales and arm plates by granules.)

Disk covered with rather swollen plates, which are either completely concealed by coarse granules or are bare at the middle only. Upper surface of arm more or less covered, with a coat of granules. Oral shields (except madreporite), adoral plates and oral plates, completely concealed by a coat of granules continuous with that which covers the interbrachial areas. Arm spines short and thick. Genital slits, four in each interbrachial area. Tentacle scales 2, well developed.

Type-species: *Ophiocryptus maculosus* sp. nov. (see below).

This genus is nearly related to *Ophioncus*, described by Ives (1889) from the "West Coast of North America." The complete concealment of the mouth plates by granules and the large amount of granulation on the arms are important differences, however, and prevent assigning the present species to Ives' genus. Moreover the bareness of certain disk-plates at their center while the radial shields are entirely concealed is an odd feature. Koehler has recently described and figured (1914, Bulletin 84, U. S. Nat. Mus., p. 8; pl. 2, figs. 1,2) an interesting little ophiidermatid from the Bahamas, which he considers a young *Ophioderma*. His admirable photographs show however that it is very close to the species I am here describing, but differs in having longer arms and bare radial shields. In the last particular and in the uniform granulation of the disk, it resembles *Ophioncus*. As it has six arm spines I suggest that it may well be called *Ophiocryptus hexacanthus*. The type is U. S. Nat. Mus. Ac. No. 41471, and is from Green Cay, Bahamas.

OPHIOCRYPtus MACULOSUS sp. nov. (*maculosus* = spotted)

Disk 6 mm. in diameter; arms 9 mm. long, flattened, especially near tip, of 17 visible joints. Disk evidently covered by rather

large, somewhat swollen plates, 80 to 100 in number, counting the small ones, but excepting the central portion of 12-15 of the largest, these are all concealed by a fairly uniform coat of granules, about 50-75 per sq. mm. No radial shields can be distinguished. The coat of granules extends along the upper surface of the arm to the very tip and covers also most of the surface of the basal side arm plates; many of the upper arm plates are bare at the center, but others are completely hidden. Interbrachial areas below covered by a uniform coat of granules which extends clear to the very jaw tips, completely concealing the oral shields (except the madreporite, which is largely bare), the adoral and the oral plates. Oral papillæ, 10-12 on each side, large and thick, not at all, except the distal-most, squamiform. Those near the tip of the jaw and the penultimate are the largest, while the middle ones are somewhat smaller; they are roundish and blunt, twice as long as thick. First under arm plate small, triangular; succeeding plates longer than wide, basal ones in contact, much wider distally than proximally and with distal margin strongly convex and a little swollen; they are somewhat hexagonal, but the three proximal sides are very short, while the distal lateral sides are long and concave. Side arm plates moderately large and projecting; each carries a series of five short, thick, almost conical, subequal spines, scarcely half as long as a joint; the spine-ridge is near the middle of the plate and the spines stand more or less straight out from it. Tentacle scales two, very large and scale-like; on the terminal joints there is only a single scale. Color (dried) dirty whitish, brightest orally; disk spotted with minute brownish-red spots, widely and irregularly spaced. A smaller specimen, preserved in formalin, has the upper surface of the arms quite pink or rose-colored and the spots on the disk are distinctly red.

This very remarkable brittle star was sent to me by Professor W. A. Hilton, who discovered it among kelp "holdfasts" at Laguna Beach, California, July 24, 1914. The holotype is in the collection of the Museum of Comparative Zoölogy, Cambridge, Mass. (Cat. No. 3914), while a paratype remains with Professor Hilton. The resemblance to the Bahamas species, referred to above, is particularly marked in the oral view but in *maculosus* the madreporite is

notably bare, while in *hexacanthus* it is indistinguishable. Seen from above, the smooth, nearly pentagonal disk of *hexacanthus* with bare radial shields, is markedly different from the somewhat swollen disk of *maculosus*, bulging a little in each interradius, covered with more or less lumpy plates and with concealed radial shields. In *hexacanthus* the arms are more than twice the diameter of the disk, while in *maculosus* they are only once and a half the disk diameter. It is to be hoped that further material of both species will soon be secured to throw light on the habits as well as on the morphology. It is particularly important to learn to what extent the granulation of disk and arms is variable. If individual diversity in this feature is very great, a good series of specimens may demonstrate that *Ophioncus* and *Ophiocryptus* are identical.